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Type: Invited Presentation

Final Abstract Number: 01.001
Session: Plenary I: Streptococcal lymphatic metastasis: Bacterial close encounters of the fourth kind
Date: Thursday, March 3, 2016
Time: 09:00-09:45
Room: Hall 4 (Plenary Hall)

Streptococcal lymphatic metastasis: Bacterial close encounters of the fourth kind

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Abstract: Anatomists of the 17th century described the milky 'vasa lymphatica' as the fourth kind of vessel, the first three kinds being arteries, veins and nerves which were, at the time, considered as such. The subsequent centuries demonstrated a role for these in transport of interstitial fluid and cells, as well as a conduit for larger molecules and tumour metastasis. Long recognised as a barrier or as a conduit for infectious pathogens travelling within leukocytes, research has focussed on the interaction of the lymphatic system with intracellular microbes; from plague and tuberculosis, to viruses and parasites. The potential for extracellular bacteria to access this system has been largely ignored, as an accidental consequence of normal interstitial fluid transport. Group A streptococcus, a virulent human pathogen that is known for its capacity to disseminate systemically, can rapidly access the lymphatic system and local lymph nodes via a hitherto unrecognised but specific interaction between its hyaluronan capsule, and the lymphatic endothelial receptor LYVE-1. The consequences of this for infection pathogenesis and immunity, are emerging areas of research that are important not only for streptococci, but for other major bacterial pathogens.

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Type: Invited Presentation

Final Abstract Number: 02.001
Session: Prevention of Childhood Pneumonia Through Vaccination
Date: Thursday, March 3, 2016
Time: 10:15-12:15
Room: Hall 1

Global burden of pneumonia

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Abstract: Global community his committed to achieving measurable Global Development Goals (MDG). MDG 4 is specifically dealing with reducing child mortality. Pneumonia and Diarrhea are perhaps two very important contributing causes of child mortality globally. While many developed countries have managed to achieve theMD4 targets, most of devolving countries far behind in achieving this important goal. Measuring pneumonia burden is difficult since there is wide variation in its presentation particularly in children and the multiple etiological agents associated with the disease. It is also well known that clinical signs of malaria and measles overlap with those of pneumonia and there is lack of clinical signs in mal nourished children leading to misclassification error. However, a number of well conducted studies1,2,3,4,5 recently have made it possible to arrive at reasonable estimates of pneumonia burden particularly for preventable disease at both global levels and regional levels. Black et al1 through a systematic analysis of data on mortality as the starting point estimated that there is nearly 8.795 million under 5 mortality globally. Of this more than 726 million (52%) occurred in the Sub—Saharan region and in the Indian subcontinent contributed mainly by 5 countries, India, Nigeria, DR. Congo, Pakistan and Afghanistan. Global Pneumonia mortality was estimated to be 1.575 million globally. The Indian component of this global mortality was estimated to be 0.371 million (~23%). The Child Health Epidemiology Reference Group (CHERG) 2 established by WHO arrived at estimates not much different from the earlier results in 2012. They estimated the global burden of pneumonia death in under 5 to be 1.396 million. In this study India contributed to 43 million pneumonia episodes leading to 0.397 million under 5 deaths.

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